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A SOVIET REVIEW OF "GEMORRAGICHESKIY NEFROSO-NEFRIT"Urologiya, No 1, 1955, pp 94-5

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[Comment: This is a review of the book Gemorragicheskii Nefroso-Nefrit (Hemorrhagic Nephroso-Nephritis) by A. A. Smorodintsev, V. G. Chudakov, and A. V. Churilov, Medgiz, Moscow, 1953, 126 pages. The review was published by N. I. Chuchelov in Urologiya, No 1, January-March 1955, pages 94-95.]

The book by Smorodintsev et al, describes a disease of virus origin which is transmitted to human beings by blood-sucking mites. This disease was first discovered and described in the Far East by Soviet workers. It was earlier confused with various other diseases, such as toxic influenza, meningitis, etc. Cases are known of operations carried out under the mistaken assumption that the patient's suffered from perforations of the stomach or duodenum. The authors should be given credit for carrying out a detailed study of the disease, establishing the fact that it is of virus etiology, and clarifying the mechanism of its transmission.

The question in regard to the name of this disease is very controversial. In the opinion of the authors of the book, the kidneys are the principle site of the infection in the human organism. According to them, the changes in the kidneys typical for this disease are not encountered in other diseases or poisonings and constitute a special form of an affliction of the kidneys which is a distinguishing mark of this disease. One may advance several objections to this assertion.

It follows from the description of the clinical aspects of the disease that the patients develop oliguria and sometimes anuria on the 5-7th day of the disease. Protein appears in the urine and a considerable number of erythrocytes and modified renal epithelium are also found there. Azotemia develops in the blood.

When an autopsy is carried out on patients who have died from the disease, extensive changes in the kidneys are observed, to which the authors refer as a bilateral acute interstitial serous-hemorrhagic nephritis, pointing out that the changes in the cortical matter of the kidneys are especially prominent and that these changes resemble those found in necrotic nephrosis of the kidneys resulting from mercuric chloride poisoning. In the opinion of the authors, specific changes in the renal tubules and in extensive regions of the cortical matter are typical for hemorrhagic nephroso-nephritis. These changes are caused by interferences with drainage produced by destruction of parts of the collecting tubules as a result of their obturation with cylinders. It follows from the description of the clinical aspects and of the preparations which have been made, as well as from the figures which accompany the text of the book, that the changes in the kidneys of which the authors speak are characteristic for a cortical necrosis of the kidneys (a necrotic nephrosis or a nephrosis of the lower nephron). This is a condition the etiology of which may be very diverse. A kidney affliction of this type occurs not only in the Far East, but can also be encountered anywhere in the world.

The changes in the kidneys which are typical for this affliction can be most frequently observed after shattering of the lower extremities by a traumatic compression, in complications following birth or abortion, after transfusion of incompatible blood, or in poisoning with antifreeze or mercuric chloride.

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The ischemia which develops as a result leads to anoxia and the latter is the cause of the dying off of the renal cells. Particularly sensitive are the glomeruli and the initial parts of the tubules. An ischemia that has continued for 4-6 hours is sufficient to cause the phenomena of the cortical necrosis of the kidneys. Against the background of the renal affliction the characteristic clinical picture of the disease develops. This picture comprises vomiting, oliguria which changes into anuria, and azotemia, so that death often results, as the authors point out. There are no reasons to assert, however, that the clinical aspects and the pathological phenomena described by the authors are characteristic only for the disease under consideration.

The data cited in the book indicates that there is a primary acute affliction of the nervous system, a fact which the authors recognize by saying that the disturbance of the nervous system is very extended and shows traits specific for this disease. The affliction of the nervous system is very clearly expressed in disturbances of the mesodermal apparatuses of the nervous system, the most important aspects of which are represented by modifications of the small blood vessels that are of a focal edematic-destructive or necrobiotic type. The changes in the central nervous system, in the opinion of the authors, are connected with the toxic effect of the virus which functions as the causative factor of the disease.

It follows from this that the disease must be interpreted somewhat differently than has been done by the authors. The primary factor in the disease is an acute affliction of the central nervous system with the virus. After the expiration of only 3-5 days, reflex action leads to the described affliction of the kidneys as a consequence of disturbances in the renal blood circulation. Thus the changes in the kidneys, described as a cortical necrosis of the kidneys or an interstitial serous-hemorrhagic nephritis, represent only one of the symptoms of the disease. These changes are not typical for the affliction of the central nervous system in question but can be observed in connection with any pathological conditions which interfere with the cortical circulation in the kidneys and thus bring about ischemia, anoxia, and necrosis.

In their discussion of the therapy of the disease, the authors are mistaken in rejecting the novocain block of the renal region, which is a very useful method of treatment in this disease. They do not mention such measures as catheterization of the renal pelvis and rinsing of the pelvis with a physiological salt solution in order to bring about a reflex action or application of carbocholine (0.25 mg subcutaneously) and other spasmolytic drugs. The authors are right in emphasizing that it is necessary to avoid a rough palpation of the renal region or sharp knocking in the region of the waist in order to test for Pasternatskiy's symptom. The method of investigation by means of the first, which is occasionally applied in practice, should be abandoned entirely, because detection of a sensitivity of the kidneys to pain and location of the foci of pain is quite possible by a careful testing of this region with the fingers.

With the stipulations made above, the book that has been reviewed must be regarded as a very useful contribution to medicine. It describes one of the reflex afflictions of the kidneys which can originate from a number of different causes.

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